Chemistry Unit (CU)
FBI Approved Standards for Scientific Testimony and Report Language for the Forensic Toxicology Discipline

1 Purpose

This document provides examples of the scientifically-supported conclusions and opinions approved for reporting examination conclusions and offering expert opinion statements during testimony by Toxicology Examiners within the Toxicology Subunit of the Chemistry Unit. It is noted that these examples are not intended to be all inclusive and may be dependent upon the precedent set by the judge or locality in which a testimony is provided. Further, these examples are not intended to serve as precedent for other forensic laboratories and do not imply that statements by other forensic laboratories are incorrect, indefensible, or erroneous.

2 Scope

This document applies to Chemistry Unit employees who prepare an FBI Laboratory *Report of Examination* (7-1 or 7-1 LIMS) and/or provide expert testimony in the forensic toxicology discipline. This document does not apply to Chemistry Unit employees who provide fact witness testimony.

3 Responsibilities

3.1 The Examiner will ensure that a *Report of Examination* uses the approved language contained within this document.

3.2 The Examiner will ensure that his/her toxicology testimony is consistent with the standards contained within this document.

3.2 The Technical and Administrative Reviewers will ensure compliance of toxicology *Reports of Examination* with the statements contained within this document.

3.3 The Unit Chief or designee will assess if toxicology testimony complies with the statements contained within this document.

4 Statements Approved for FBI Toxicology Testimony and/or Laboratory Reports

For more detailed guidance on report writing in the Toxicology Subunit, see the *General Approach to Report Writing in the Toxicology Subunit* standard operating procedure.

- The examiner may report and/or state his/her analytical findings of the presence or absence of a drug, drug metabolite, or poison, as well as quantitative results.

- The examiner may report and/or state the estimated measurement uncertainty associated with the quantitative findings of a drug, drug metabolite, or poison.

- The examiner may report and/or state the pharmacokinetic and pharmacodynamic effects of drugs and poisons based on data published in peer reviewed literature or other authoritative sources.

- The examiner may report and/or state his/her opinion as to the effects of drugs or poisons on the average human. This opinion should be based on the facts of the case, medical information about the individual that the specimens were collected from (e.g., weight, height, disease state, age), current published studies, and/or the examiner's training in the fields of pharmacology, physiology, pathology, clinical chemistry, and/or toxicology.

- The examiner may report and/or state the limitations of his/her examinations and opinion.

- The examiner may report and/or state that a reported blood concentration is within the therapeutic range, toxic range, or consistent with reported fatal concentrations, provided the statement is based on data published in peer reviewed literature or other authoritative sources.

- The examiner may report and/or state that a drug or poison found in a hair specimen is consistent with exposure (either ingestion or environmental) to the drug or poison.

- The examiner may report and/or state the results of segmental analyses of hair samples and interpret those findings based on an average growth rate of 1 cm/month provided he/she acknowledges variation in inter-individual growth rates and assumes proper specimen collection.

- The examiner may report and/or state an extrapolated ethanol concentration in a blood sample collected from a living person.

- The examiner may report and/or state that hair findings indicate the ingestion of a drug or poison if validated wash procedures have been performed that can differentiate between exposure and ingestion and/or if a metabolite that is uniquely associated with ingestion has been identified in the sample.

5 Statements Not Approved For FBI Toxicology Testimony and/or Laboratory Reports

- An examiner may not report or state the dose of a drug or poison given based on analytical findings in post-mortem samples.

- An examiner may not report or state an opinion that suggests his/her interpretation of the effects of a drug or poison can be specified to the individual whose sample was tested.

- An examiner may not report or state an opinion that a drug or poison finding in hair is proof of ingestion of the drug or poison unless a metabolite that is unique to ingestion is also identified and/or validated wash procedures have been performed that can differentiate between exposure and ingestion.

- An examiner may not report or state an opinion that an individual was impaired based on a drug concentration in a urine or hair sample.

6 Laboratory Report Reviews

The content of a Toxicology *Report of Examination* will be reviewed per the *Chemistry Unit Case Record and Review Procedures* standard operating procedure ensuring compliance with the approved statements in this document.

7 Testimony Reviews

Toxicology testimonies will be reviewed following the *FBI Laboratory Practices for Court Testimony Monitoring*. The review will ensure compliance with the statements in this document.

8 References

FBI Laboratory Chemistry Unit Toxicology Subunit Manual, General Approach to Report Writing in the Toxicology Subunit. Latest Revision.

FBI Laboratory Chemistry Unit Quality Assurance and Operations Manual, Chemistry Unit Case Record and Review Procedures. Latest Revision.

ASCLD-LAB-*International* Supplemental Requirement for the Accreditation of Forensic Science Testing and Calibration Laboratories. American Society of Crime Laboratory Directors/Laboratory Accreditation Board, Garner, NC, 2011.

FBI Laboratory Quality Assurance Manual. Latest Revision.

FBI Laboratory Operations Manual. Latest Revision.

Rev. #	Issue Date:	History:
0	05/28/2014	New document.

Redacted - Signatures on File

Approval

Chemistry Unit Chief: Date: 05/27/2014

QA Approval

Acting Quality Manager: Date: 05/27/2014

Issuance

Tox Subunit Manager: Date: 05/27/2014